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22852 7590 12/22/2009 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER BAIG, ADNAN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,923	Applicant(s) TANG, JIE	
	Examiner ADNAN BAIG	Art Unit 2461	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-23 and 26-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-23 and 26-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8, 10-23, and 26-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 1, lines 7-9 cite "if it is judged that the terminal device can be maintained automatically, maintaining, by said DM server, the terminal device following an open mobile alliance (OMA) DM process". In regards to the applicant disclosure, an open mobile alliance DM process, is described in **Para [0003-0013]**. It is unclear how the DM server can be a person in a customer service center in order to maintain the device containing errors. Furthermore claims 2-7 which depend from claim 1 are unclear.

Claim 8 contains similar features of the limitation cited in claim 1, therefore claim 8 is unclear for the same reasons as cited above. Furthermore claims 10-14 which depend from claim 8 are unclear.

Claim 15, contains similar features of the limitation cited in claim 1, therefore claim 15 is unclear for the same reasons as cited above. Furthermore claim 16 which depends from claim 15 is unclear.

Claim 17, contains similar features of the limitation cited in claim 1, therefore claim 17 is unclear for the same reasons as cited above. Furthermore claims 18-22 which depends from claim 17 are unclear.

Claim 23, contains similar features of the limitation cited in claim 1, therefore claim 23 is unclear for the same reasons as cited above.

Claim 26, contains similar features of the limitation cited in claim 1, therefore claim 26 is unclear for the same reasons as cited above. Furthermore claims 23-31 which depends from claim 26 are unclear.

Claim 32, contains similar features of the limitation cited in claim 1, therefore claim 32 is unclear for the same reasons as cited above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 7-8, 10-11, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et al. US (2005/0102662) in view of Aiba et al. USP (7,600,226), and further in view of Applicants admitted prior art (AAPA).

Regarding Claim 1, Samoslovic discloses a method of maintaining a terminal device comprising the following steps:

receiving, at a Device Management (DM) Server (**see Fig. 2 Parent server 14**), terminal information from a software program interface (**paragraph [0014] lines 5-14**) provided by a DM Agent module (**see updatable component in device in Para, [0008]**) of a terminal device; (**Referring to Fig. 1, Samsalovic illustrates a client 12 (terminal device) with an updatable component, is able to communicate device information to a server (item 14), see Para [0008]**).

reporting, by said DM Server, said terminal information to a Maintenance Unit (MU), (**In regards to applicants disclosure in paragraph [0040], the maintenance unit is coupled to the DM server and is adapted to acquire, store, and maintain the information of the terminal device. Referring to Fig. 3, Samsalovic illustrates updater 32 (i.e., maintenance unit) coupled to server 34. Once the client contacts the parent server, then the client is able to obtain and download updates as**

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determined by the information stored in the device relative to the most current information maintained by the updater, see paragraphs [0017] & [0020-0021]

Referring to Fig. 2, Samsolovic illustrates servers 20 and 22 working together through central server 14 (*i.e., DM server*) are referred to as an updater. The server 14 provides an interface between the client 12 and the servers 20 and 22 in order to facilitate software and configuration updates (*i.e., maintain terminal device automatically*). Further Samolovic discloses any one of the servers 14, 20, and 22 can contain the update information (**see Para [0016] line 11-14**), implying if one server is not able to maintain the client device 12, then an alternate server (*i.e., updater 20,22,*) is able to contain update information for the client device 12, **see Para [0016]**.

Samsolovic teaches that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (*i.e., return to service center*), **See paragraphs [0002-0005]**).

Samsolovic does not disclose upon receiving said terminal information, judging, by said DM Server, whether the terminal device can be maintained automatically, if it is judged that the terminal device can be maintained automatically, maintaining, by said DM Server, the terminal device, otherwise reporting, by said DM Server, said terminal information to a Maintenance Unit (MU), however the limitation is known in the art of communications by evidence of Aiba et al. USP (7,600,226)

Referring to Fig. 1, Aiba discloses upon receiving version information data of a device 4000, PC 1001 judges whether the device can be maintained automatically, if it is judged that the device can be maintained automatically, maintaining the device by said PC server 1001, **(see Fig. 5 step S1007 & Col. 7 line 41 – Col. 8 lines 1-25)**

Aiba teaches conventionally, printer driver in information processing apparatus may be updated in such a manner that a user inquiries a support center for updated printer drivers, where it is required the user knows version information regarding the users current printer driver. In the conventional method, there was a problem in that finding the latest printer drive was time consuming and onerous for the user, **(see Col. 1 lines 19-49)**.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for judging whether a terminal device can be automatically maintained at a server by its terminal information, otherwise reporting the terminal information to a maintenance unit by including the teachings of Samsolovic who discloses receiving at a device management server, terminal information, from a software interface provided by a DM agent module of a terminal device, where either a central server or an updater, can automatically maintain the terminal device, within the teachings of Aiba who discloses judging by a server, whether version information data of a device received at

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the server can be maintained automatically, and maintaining by the server, the device if it is judged the device can be maintained automatically, in order for a client to avoid contacting a support center which is time consuming.

The combination of Samsolovic in view of Aiba do not disclose if it is judged that the terminal device can be maintained automatically, maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, however the limitation is disclosed in the applicants admitted prior art (AAPA).

Referring to Fig. 3, in step 13, judging by the DM server whether the terminal device can be maintained automatically is illustrated. *"The DM server searches the local maintenance database to see whether there is corresponding solution information according to the application information indicated in the error information; if there is a matched solution, the DM server determines the error may be solved automatically, and the flow proceeds to step 16", (see Para [0013]).* In step 16, *"the DM server implements the terminal software resolution following the standard OMA DM process", (see Para [0116])*

Referring to (Para [0002-0013]), the standard open mobile alliance (OMA) DM process is disclosed for automatically maintaining a terminal device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, if it is judged that the terminal device can be maintained automatically by including the teachings of Samsolovic in view of Aiba, within the teachings of the applicants admitted prior art, in order for a client to avoid contacting a support center which is time consuming.

Regarding Claim 2, the combination of Samolovic in view of Aaiba, and further in view of applicants admitted prior art disclose the method as in claim 1, wherein said software program interface comprises a messaging interface, a file interface, an Application programming Interface (API), or a Web service interface, (**Samsolovic, see paragraph [0052] (e.g., API). The server communicates the devices information e.g., update, through messages (control interface) between the server and updater 32 of Fig. 3, see paragraph [0039]).**

Regarding Claim 3, the combination of Samsolovic in view of Aaiba, and further in view of applicants admitted prior art disclose the method as in claim 2, wherein said messaging interface comprises an extensible markup language (XML) interface or a network protocol interface, (**Referring to Fig. 4, Samsolovic illustrates an XML interface at step 2, see paragraphs [0015] & [0040]).**

Regarding Claim 4, the combination of Samsolovic in view of Aiba, and further in view of applicants admitted prior art discloses the method as in claim 2, wherein when said software program interface employs the API (**Samsolovic, paragraph [0052]**), the terminal information is combined into an XML format and is transmitted to the API as an argument, (**Samsolovic, see Fig. 4 step 2 & paragraph [0040]**).

Regarding Claim 7, the combination of Samsolovic in view of Rao, discloses the method as of claim 1, wherein said terminal information comprises error information created during an operation of terminal software error information created by the terminal hardware, and process information created during the operation of the terminal, (**Referring to Fig. 5, when XML software is deployed in table 1, error information is created, see paragraph [0078]**).

(**Samsolovic teaches error information in a software program where an update is not able to be provided, (e.g., background), paragraph [0004]**),

Regarding Claim 8, Samoslovic discloses a method of maintaining a terminal device comprising the following steps:

receiving, at a Device Management (DM) Server (**see Fig. 2 Parent server 14**), terminal information from a software program interface (**paragraph [0014] lines 5-14**)

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provided by a DM Agent module (**see updatable component in device in Para, [0008]**) of a terminal device; (**Referring to Fig. 1, Samsalovic illustrates a client 12 (terminal device) with an updatable component, is able to communicate device information to a server (item 14), see Para [0008]**).

reporting, by said DM Server, said terminal information to a Maintenance Unit (MU), (**In regards to applicants disclosure in paragraph [0040], the maintenance unit is coupled to the DM server and is adapted to acquire, store, and maintain the information of the terminal device. Referring to Fig. 3, Samsalovic illustrates updater 32 (i.e., maintenance unit) coupled to server 34. Once the client contacts the parent server, then the client is able to obtain and download updates as determined by the information stored in the device relative to the most current information maintained by the updater, see paragraphs [0017] & [0020-0021]**).

Referring to Fig. 2, Samsolovic illustrates servers 20 and 22 working together through central server 14 (**i.e., DM server**) are referred to as an updater. The server 14 provides an interface between the client 12 and the servers 20 and 22 in order to facilitate software and configuration updates (**i.e., maintain terminal device automatically**). Further Samolovic discloses any one of the servers 14, 20, and 22 can contain the update information (**see Para [0016] line 11-14**), implying if one server is not able to maintain the client device 12, then an alternate server (**i.e., updater 20,22,**) is able to contain update information for the client device 12, **see Para [0016]**.

upon receiving said terminal information, determining, by said MU, the corresponding software update package and sending said software update package to the DM Server, **(see paragraph [0020] lines 7-13)**

maintaining, by said DM Server, the terminal device with said software update package, **(see paragraph [0021] lines 6-15)**

Samsolovic teaches that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (*i.e., return to service center*), **See paragraphs [0002-0005]).**

Samsolovic does not disclose, judging, by said DM Server, whether the terminal device can be maintained automatically, if it is judged that the terminal device can be maintained automatically, maintaining, by said DM Server, the terminal device, with said software update package, otherwise reporting, by said DM Server, said terminal information to a Maintenance Unit (MU), however the limitation is known in the art of communications by evidence of Aiba et al. USP (7,600,226)

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Referring to Fig. 1, Aiba discloses upon receiving version information data of a device 4000, PC 1001 judges whether the device can be maintained automatically, if it is judged that the device can be maintained automatically, maintaining the device with a software update by said PC server 1001, **(see Fig. 5 step S1007 & Col. 7 line 41 – Col. 8 lines 1-25)**

Aiba teaches conventionally, printer driver in information processing apparatus may be updated in such a manner that a user inquiries a support center for updated printer drivers, where it is required the user knows version information regarding the users current printer driver. In the conventional method, there was a problem in that finding the latest printer drive was time consuming and onerous for the user, **(see Col. 1 lines 19-49)**.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for judging whether a terminal device can be automatically maintained at a server by its terminal information, otherwise reporting the terminal information to a maintenance unit by including the teachings of Samsolovic who discloses receiving at a device management server, terminal information, from a software interface provided by a DM agent module of a terminal device, reporting, by said DM Server, said terminal information to a Maintenance Unit (MU), upon receiving said terminal information, determining, by said MU, the corresponding software update package and sending said

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software update package to the DM Server, where either a central server or an updater, can automatically maintain the terminal device, within the teachings of Aiba who discloses judging by a server, whether version information data of a device received at the server can be maintained automatically, and maintaining by the server, the device if it is judged the device can be maintained automatically, in order for a client to avoid contacting a support center which is time consuming.

The combination of Samsolovic in view of Aiba do not disclose if it is judged that the terminal device can be maintained automatically, maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, however the limitation is disclosed in the applicants admitted prior art (AAPA).

Referring to Fig. 3, in step 13, judging by the DM server whether the terminal device can be maintained automatically is illustrated. *"The DM server searches the local maintenance database to see whether there is corresponding solution information according to the application information indicated in the error information; if there is a matched solution, the DM server determines the error may be solved automatically, and the flow proceeds to step 16", (see Para [0013]).* In step 16, *"the DM server implements the terminal software resolution following the standard OMA DM process", (see Para [0116])*

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Referring to (**Para [0002-0013]**), the standard open mobile alliance (OMA) DM process is disclosed for automatically maintaining a terminal device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, if it is judged that the terminal device can be maintained automatically by including the teachings of Samsolovic in view of Aiba, within the teachings of the applicants admitted prior art, in order for a client to avoid contacting a support center which is time consuming.

Regarding Claim 10, the combination of Samsolovic in view of Aiba, and further in view of AAPA, disclose the method as in claim 8, wherein said software program interface comprises a network protocol interface, an XML interface, or an API, (**Samsolovic, see paragraph [0052]**)

Regarding Claim 11, the combination of Samsolovic in view of Aiba, and further in view of AAPA disclose the method as in claim 10, wherein when said software program interface employs the API (**Samsolovic, paragraph [0052]**), terminal device combines the terminal information into an XML format and send the combined terminal information to the API as an argument, (**Samsolovic, see Fig. 4 step 2 & paragraph [0040]**).

Regarding Claim 14, the combination of Samsolovic in view of Aiba, and further in view of AAPA disclose the method as in claim 8, wherein said terminal information comprises error information created during operation of the terminal software error information created by terminal hardware, and process information created during operation of the terminal. **(Referring to Fig. 5, when XML software is deployed in table 1, error information is created, see paragraph [0078]).**

(Samsolovic teaches error information in a software program where an update is not able to be provided, (e.g., background), paragraph [0004])

Regarding Claim 15, Samsolovic discloses a Device Management (DM) system, comprising:

a DM Server (**Fig. 1, Server14**) adapted to manage a terminal device, (**Fig. 1, client 12**),

a DM Agent module located in the terminal device (**see updatable component in paragraph [0008]**) and interacting with said DM Server, (**Referring to Fig. 1, Samsalovic illustrates a client 12 (terminal device) interacting device information to a server (item 24) which manages the device, see paragraph [0008].**)

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a Maintenance Unit (MU) coupled to said DM Server and adapted to receive information of the terminal device, (**Referring to Fig. 3, Samsalovic illustrates updater 32 (maintenance unit) coupled to server 34, see paragraphs [0017] & [0020-0021].**

wherein: said DM Agent module and said DM Server each have a software program interface (**see paragraph [0008] & [0014] lines 11-16).**

the software program interface of said DM Agent module is configured to receive the terminal information reported from the terminal device and forward the terminal information to the DM Server, (**see paragraph [0008]**)

said DM Server is configured to report said terminal information to said MU, (**see paragraph [0020] lines 7-10).**

Referring to Fig. 2, Samsolovic illustrates servers 20 and 22 working together through central server 14 (*i.e., **DM server***) are referred to as an updater. The server 14 provides an interface between the client 12 and the servers 20 and 22 in order to facilitate software and configuration updates (*i.e., **maintain terminal device automatically***). Further Samolovic discloses any one of the servers 14, 20, and 22 can contain the update information (**see Para [0016] line 11-14**), implying if one server is not able to

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maintain the client device 12, then an alternate server (*i.e., updater 20,22,*) is able to contain update information for the client device 12, **see Para [0016]**.

Referring to **(Para [0090])**, Samsolovic discloses sending identification information of the client to a central location in order to determine the cause of error.

Samsolovic teaches that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (*i.e., return to service center*), **See paragraphs [0002-0005]**).

Samsolovic does not disclose said DM Server is further configured to judge whether said terminal device can be maintained automatically; if it is judged that the terminal device can be maintained automatically, said DM server maintains said terminal device; otherwise, said DM server sends the error information of said first terminal device to said MU, however the limitation is known in the art of communications by evidence of Aiba et al. USP (7,600,226)

Referring to Fig. 1, Aiba discloses upon receiving version information data of a device 4000, PC 1001 judges whether the device can be maintained automatically, if it is judged that the device can be maintained automatically, maintaining the device with a

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software update by said PC server 1001, (**see Fig. 5 step S1007 & Col. 7 line 41 – Col. 8 lines 1-25**)

Aiba teaches conventionally, printer driver in information processing apparatus may be updated in such a manner that a user inquiries a support center for updated printer drivers, where it is required the user knows version information regarding the users current printer driver. In the conventional method, there was a problem in that finding the latest printer drive was time consuming and onerous for the user, (**see Col. 1 lines 19-49**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for judging whether a terminal device can be automatically maintained at a server by its terminal information, otherwise send the error information of the terminal to a maintenance unit by including the teachings of Samsolovic who discloses a DM Server adapted to manage a terminal device, a DM Agent module located in the terminal device and interacting with said DM Server, a Maintenance Unit (MU) coupled to said DM Server and adapted to receive information of the terminal device, wherein: said DM Agent module and said DM Server each have a software program interface; the software program interface of said DM Agent module is configured to receive the terminal information reported from the terminal device and forward the terminal information to the DM Server; said DM Server is configured to report said terminal

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information to said MU, where either a central server or an updater, can automatically maintain the terminal device, within the teachings of Aiba who discloses judging by a server, whether version information data of a device received at the server can be maintained automatically, and maintaining by the server, the device if it is judged the device can be maintained automatically, in order for a client to avoid contacting a support center which is time consuming.

The combination of Samsolovic in view of Aiba do not disclose if it is judged that the terminal device can be maintained automatically, maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, however the limitation is disclosed in the applicants admitted prior art (AAPA).

Referring to Fig. 3, in step 13, judging by the DM server whether the terminal device can be maintained automatically is illustrated. *"The DM server searches the local maintenance database to see whether there is corresponding solution information according to the application information indicated in the error information; if there is a matched solution, the DM server determines the error may be solved automatically, and the flow proceeds to step 16", (see Para [0013]).* In step 16, *"the DM server implements the terminal software resolution following the standard OMA DM process", (see Para [0116])*

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Referring to (**Para [0002-0013]**), the standard open mobile alliance (OMA) DM process is disclosed for automatically maintaining a terminal device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, if it is judged that the terminal device can be maintained automatically by including the teachings of Samsolovic in view of Aiba, within the teachings of the applicants admitted prior art, in order for a client to avoid contacting a support center which is time consuming.

Regarding Claim 16, the combination of Samsolovic in view of Aiba, and further in view of AAPA, discloses the DM system as in claim 15, wherein said software program interface comprises a messaging interface, a file interface, an application programming interface (API), or a Web service interface, (**Samsolovic, see Para [0052]**).

6. Claims 5-6 and 12-13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et. al (US 2005/0102662) in view of Aiba et al. USP (7,600,226), further in view of Applicants admitted prior art (AAPA), and further in view of Chatrath US (2005/0060361).

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Regarding Claim 5, the combination of Samsalovic in view of Aiba, and further in view of AAPA discloses the method of claim 1 wherein said DM Agent module transmits said terminal information.

forwarding, by said DM Agent module, said terminal information to a DM Server (Referring to Fig. 1, Samsalovic illustrates a client 12 (**terminal device**) with an updatable component is able to transmit device information to a server (**item 14**), **see Para [0008]**).

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (e.g., return to service center), **See paragraphs [0002-0005]**).

The combination of Samsolovic in view of Aiba, and further in view of AAPA do not disclose the DM agent module transmitting said terminal information via an extended open mobile alliance protocol. However the limitation is known in the art of communications, however the limitation is known in the art of communications by evidence of Chatrath US (2005/0060361).

(Chatrath teaches a terminal is able to communicate terminal information with a server, via an extended open mobile alliance protocol, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement the method of claim 1 where a DM Agent module transmits said terminal information to a DM server as taught by the combination Samsolovic in view of Aiba, and further in view of applicants admitted prior art by using an extended Open Mobile Alliance DM protocol between a terminal and a server as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 6, the combination of Samsolovic in view of Aiba, further in view of AAPA, and further in view of Chatrath disclose the method as in claim 5, wherein the transmission of said terminal information by said DM Agent module is implemented:

with a command of the extend OMA DM protocol which supports active event triggered by clients;

or by extending a standard command of the OMA DM protocol into a terminal information reporting command;

or by adding a special terminal information reporting command into the OMA DM protocol;

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or with a command of the OMA DM protocol directly, **(Referring to Fig. 2, Chatrath illustrates a management session message (command) transmitted to a management server at step 209 using the OMA DM protocol, see paragraph [0027] lines 18-22).**

Regarding Claim 12, the combination of Samsalovic in view of Aiba, and further in view of AAPA discloses the method of claim 1 as cited above

The combination of Samsalovic in view of Aiba, and further in view of AAPA do not disclose the DM agent module transmitting said terminal information via an extended open mobile alliance protocol. However the limitation is known in the art of communications, however the limitation is known in the art of communications by evidence of Chatrath US (2005/0060361).

(Chatrath teaches a terminal is able to communicate terminal information with a server, via an extended open mobile alliance protocol, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

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Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement the method of claim 1 where a DM Agent module transmits said terminal information to a DM server as taught by the combination Samsolovic in view of Aiba, and further in view of AAPA by using an extended Open Mobile Alliance DM protocol as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 13 the combination of Samsolovic in view of Aiba, further in view of AAPA, and further in view of Chatrath disclose the method as in claim 12, wherein the transmission of said terminal information by said DM Agent module is implemented:

with commands supporting active event triggered by clients in the extend OMA DM protocol; or

by extending a standard command of OMA DM protocol into a terminal information reporting command; or

by adding a special terminal information reporting command into the OMA DM protocol; or

with a command of the OMA DM protocol directly. **(Referring to Fig. 2, Chatrath illustrates a management session message (command) transmitted to a management server at step 209 using the OMA DM protocol, see paragraph [0027] lines 18-22).**

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7. Claims 17-20, 23, 26-29, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et al. US (2005/0102662) in view of Rao (US 2004/0123282), further in view of Aiba et al. USP (7,600,226), and further in view of Applicants admitted prior art (AAPA).

Regarding Claim 17, Samsolovic discloses a system for reporting terminal information applied to a communication network, the system comprising:

a terminal (**see Fig. 1, Client 12 & Para [0020] lines 10-13**)

a management unit in said terminal, configured to receive information of said terminal reported by said terminal, (**see updatable component in device in Para [0008]**).

a management server (**see Fig. 1, Item 14**) configured to receive the information sent by said management unit (**see paragraph [0008]**).

Referring to (**Para [0090]**), Samsolovic discloses sending identification information of the client to a central location in order to determine the cause of error.

Samsolovic teaches that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (*i.e., return to service center*), **See paragraphs [0002-0005]**).

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Samsolovic does not expressly disclose the terminal device reporting the terminal information to the Management Unit directly. However the limitation is known in the art of communications, by evidence of Rao (US 2004/0123282)

(Rao discloses a terminal device reporting (**Fig. 1, Item 115**), the terminal information to a Management Unit directly (**Fig. 1, Item 117**), where the bootstrap 115 located in the mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9**).

(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to include a management unit in said terminal, and a management server, configured to receive information sent by said management unit as taught by Samsolovic, by using a terminal device to report the terminal information to a management unit directly for receiving software updates as taught by Rao, to receive software updates in the instance of errors in the device for user convenience and quality of service.

Referring to Fig. 2, Samsolovic illustrates servers 20 and 22 working together through central server 14 (*i.e.*, **DM server**) are referred to as an updater. The server 14 provides

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an interface between the client 12 and the servers 20 and 22 in order to facilitate software and configuration updates (*i.e., maintain terminal device automatically*). Further Samolovic discloses any one of the servers 14, 20, and 22 can contain the update information (**see Para [0016] line 11-14**), implying if one server is not able to maintain the client device 12, then an alternate server (*i.e., updater 20,22,*) is able to contain update information for the client device 12, **see Para [0016]**.

(In regards to applicants disclosure in paragraph [0040], the maintenance unit is coupled to the DM server and is adapted to acquire, store, and maintain the information of the terminal device. Referring to Fig. 3, Samsalovic illustrates updater 32 (*i.e., maintenance unit*) coupled to server 34. Once the client contacts the parent server, then the client is able to obtain and download updates as determined by the information stored in the device relative to the most current information maintained by the updater, **see paragraphs [0017] & [0020-0021]**.

The combination of Samsolovic in view of Rao do not disclose wherein: said management server is further configured to judge whether said terminal can be maintained automatically; if it is judged that the terminal can be maintained automatically, said management server maintains said terminal; otherwise, said management server sends error information of said terminal to a maintenance unit, however the limitation is known in the art of communications by evidence of Aiba et al. USP (7,600,226)

Referring to Fig. 1, Aiba discloses upon receiving version information data of a device 4000, PC 1001 judges whether the device can be maintained automatically, if it is judged that the device can be maintained automatically, maintaining the device with a software update by said PC server 1001, (**see Fig. 5 step S1007 & Col. 7 line 41 – Col. 8 lines 1-25**)

Aiba teaches conventionally, printer driver in information processing apparatus may be updated in such a manner that a user inquiries a support center for updated printer drivers, where it is required the user knows version information regarding the users current printer driver. In the conventional method, there was a problem in that finding the latest printer drive was time consuming and onerous for the user, (**see Col. 1 lines 19-49**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for judging whether a terminal device can be automatically maintained at a management server by its terminal information, otherwise send the error information of the terminal to a maintenance unit by including the teachings of Samsolovic in view of Rao, who discloses a terminal, a management unit in said terminal configured to receive information of said terminal reported by said terminal, a management server configured to receive information sent by said management unit, and where either a central server

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or an updater, can automatically maintain the terminal device, within the teachings of Aiba who discloses judging by a server, whether version information data of a device received at the server can be maintained automatically, and maintaining by the server, the device if it is judged the device can be maintained automatically, in order for a client to avoid contacting a support center which is time consuming.

The combination of Samsolovic in view Rao, and further in view of Aiba do not disclose if it is judged that the terminal device can be maintained automatically, maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, however the limitation is disclosed in the applicants admitted prior art (AAPA).

Referring to Fig. 3, in step 13, judging by the DM server whether the terminal device can be maintained automatically is illustrated. *"The DM server searches the local maintenance database to see whether there is corresponding solution information according to the application information indicated in the error information; if there is a matched solution, the DM server determines the error may be solved automatically, and the flow proceeds to step 16", (see Para [0013]).* In step 16, *"the DM server implements the terminal software resolution following the standard OMA DM process", (see Para [0116])*

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Referring to (**Para [0002-0013]**), the standard open mobile alliance (OMA) DM process is disclosed for automatically maintaining a terminal device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, if it is judged that the terminal device can be maintained automatically by including the teachings of Samsolovic in view of Rao, and further in view of Aiba, within the teachings of the applicants admitted prior art, in order for a client to avoid contacting a support center which is time consuming.

Regarding Claim 18, the combination of Samsolovic in view of Rao, in view of Aiba, and further in view of AAPA discloses the system as in claim 17, wherein the information of said first terminal is reported to said management unit via a software program interface, (**see Samsolovic, Para [0014] lines 5-16 & Rao, Para [0025]**).

said software program interface comprises a messaging interface, a file interface, an application programming interface (API), or a Web service interface, (**see Samsolovic, paragraph [0052]**).

Regarding Claim 19, the combination of Samsolovic in view of Rao, further in view of Aiba, and further in view of AAPA disclose the system as in claim 18, wherein said

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messaging interface comprises an extensible markup language (XML) interface or a network protocol interface. **(Referring to Fig. 4, Samsolovic illustrates an XML interface at step 2, see paragraphs [0015] & [0040]).**

Regarding Claim 20, the combination of Samsolovic in view of Rao, further in view of Aiba, and further in view of AAPA disclose the system as in claim 18, wherein when said software program interface employs said API **(Samsolovic, Para [0052])**, the information of the said first terminal is combined into an XML format and is reported to said API as an argument, **(see Samsolovic, Fig. 4 step 2 & paragraph [0040]).**

Regarding Claim 23, Samsolovic discloses a system for maintaining a terminal device applied to a communication network, the system comprising:

a terminal **(see Fig. 1, Client 12 & Para [0020] lines 10-13)**

a management unit in said terminal, **(see updatable component in device in Para [0008])** configured to receive error information **(See fig. 5, Table 1)** of said first terminal;

a management server, configured to receive the error information sent by management unit; **(see paragraph [0008] & Para [0020-0021])**

a maintenance unit, configured to receive the error information of said terminal sent by said management server and send a corresponding software update package for maintaining said terminal to said management server, **(In regards to applicants**

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disclosure in paragraph [0040], the maintenance unit is coupled to the DM server and is adapted to acquire, store, and maintain the information of the terminal device. Referring to Fig. 3, Samsalovic illustrates updater 32 (*i.e., maintenance unit*) coupled to server 34. Once the client contacts the parent server, then the client is able to obtain and download updates as determined by the information stored in the device relative to the most current information maintained by the updater, see paragraphs [0017] & [0020-0021].

Referring to **(Para [0090])**, Samsolovic discloses sending identification information of the client to a central location in order to determine the cause of error.

Samsolovic does not expressly disclose the terminal device reporting the error information to the Management Unit directly. However the limitation is known in the art of communications by evidence of Rao (US 2004/0123282)

(Rao discloses a terminal device reporting **(Fig. 1, Item 115)**, the terminal information to a Management Unit directly **(Fig. 1, Item 117)**, where the bootstrap 115 located in the mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9**).

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(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to include a management unit in said terminal configured to receive error information of the terminal, and a management server, configured to receive the error information sent by the management unit as taught by Samsolovic, by using a terminal device to report the terminal information to a management unit directly for receiving software updates as taught by Rao, to receive software updates in the instance of errors in the device for user convenience and quality of service.

Referring to Fig. 2, Samsolovic illustrates servers 20 and 22 working together through central server 14 (*i.e., DM server*) are referred to as an updater. The server 14 provides an interface between the client 12 and the servers 20 and 22 in order to facilitate software and configuration updates (*i.e., maintain terminal device automatically*). Further Samolovic discloses any one of the servers 14, 20, and 22 can contain the update information (**see Para [0016] line 11-14**), implying if one server is not able to maintain the client device 12, then an alternate server (*i.e., updater 20,22,*) is able to contain update information for the client device 12, **see Para [0016]**.

The combination of Samsolovic in view of Rao do not disclose wherein: said management server is further configured to judge whether said terminal can be

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maintained automatically; if it is judged that the terminal can be maintained automatically, said management server maintains said terminal; otherwise, said management server sends error information of said terminal to a maintenance unit, however the limitation is known in the art of communications by evidence of Aiba et al. USP (7,600,226)

Referring to Fig. 1, Aiba discloses upon receiving version information data of a device 4000, PC 1001 judges whether the device can be maintained automatically, if it is judged that the device can be maintained automatically, maintaining the device with a software update by said PC server 1001, (**see Fig. 5 step S1007 & Col. 7 line 41 – Col. 8 lines 1-25**)

Aiba teaches conventionally, printer driver in information processing apparatus may be updated in such a manner that a user inquiries a support center for updated printer drivers, where it is required the user knows version information regarding the users current printer driver. In the conventional method, there was a problem in that finding the latest printer drive was time consuming and onerous for the user, (**see Col. 1 lines 19-49**).

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Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for judging whether a terminal device can be automatically maintained at a management server by its error information, otherwise send the error information of the terminal to a maintenance unit by including the teachings of Samsolovic in view of Rao, who discloses a terminal, a management unit in said terminal configured to receive error information of said terminal, a management server configured to receive the error information sent by the management unit, and where either a central server or an updater, can automatically maintain the terminal device, within the teachings of Aiba who discloses judging by a server, whether version information data of a device received at the server can be maintained automatically, and maintaining by the server, the device if it is judged the device can be maintained automatically, in order for a client to avoid contacting a support center which is time consuming.

The combination of Samsolovic in view Rao, and further in view of Aiba do not disclose if it is judged that the terminal device can be maintained automatically, maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, however the limitation is disclosed in the applicants admitted prior art (AAPA).

Referring to Fig. 3, in step 13, judging by the DM server whether the terminal device can be maintained automatically is illustrated. *"The DM server searches the local maintenance database to see whether there is corresponding solution information*

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according to the application information indicated in the error information; if there is a matched solution, the DM server determines the error may be solved automatically, and the flow proceeds to step 16", (see Para [0013]). In step 16, "the DM server implements the terminal software resolution following the standard OMA DM process", (see Para [0116])

Referring to (Para [0002-0013]), the standard open mobile alliance (OMA) DM process is disclosed for automatically maintaining a terminal device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, if it is judged that the terminal device can be maintained automatically by including the teachings of Samsolovic in view of Rao, and further in view of Aiba, within the teachings of the applicants admitted prior art, in order for a client to avoid contacting a support center which is time consuming.

Regarding Claim 26, Samsolovic discloses a method of reporting terminal information applied to a communication network, the method comprising:

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reporting, by a terminal (**see Fig. 1, Client 12**) accessing said communication network (**see Fig. 1, Item 16**), the information of the terminal to a management unit, (**See updatable component in Para [0008]**).

upon receiving the information of the terminal, the management unit sending the information to a management server, (**Referring to Fig. 1, the updatable component (management unit) transmits terminal information to a server, see paragraph [0008] & [0020-0021]**).

Samsolovic teaches that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (*i.e., return to service center*), **See paragraphs [0002-0005]**).

Samsolovic does not expressly disclose the terminal device reporting the terminal information to the Management Unit directly. However the limitation is known in the art of communications by evidence of Rao (US 2004/0123282)

(Rao discloses a terminal device reporting (**Fig. 1, Item 115**), the terminal information to a Management Unit directly (**Fig. 1, Item 117**), where the bootstrap 115 located in the mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9**).

(Rao teaches that software updates are needed in the instance of "errors" or "bugs",
see Para [0005-0006]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, for a management server to receive terminal information from a management unit of a terminal accessing a communications network as taught by Samsolovic, by using a terminal device to report the terminal information to a management unit directly for receiving software updates as taught by Rao, to receive software updates in the instance of errors in the device for user convenience and quality of service.

Referring to Fig. 2, Samsolovic illustrates servers 20 and 22 working together through central server 14 (*i.e., DM server*) are referred to as an updater. The server 14 provides an interface between the client 12 and the servers 20 and 22 in order to facilitate software and configuration updates (*i.e., maintain terminal device automatically*). Further Samolovic discloses any one of the servers 14, 20, and 22 can contain the update information (**see Para [0016] line 11-14**), implying if one server is not able to maintain the client device 12, then an alternate server (*i.e., updater 20,22,*) is able to contain update information for the client device 12, **see Para [0016]**.

(In regards to applicants disclosure in paragraph [0040], the maintenance unit is coupled to the DM server and is adapted to acquire, store, and maintain the information

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of the terminal device. Referring to Fig. 3, Samsalovic illustrates updater 32 (*i.e.*, *maintenance unit*) coupled to server 34. Once the client contacts the parent server, then the client is able to obtain and download updates as determined by the information stored in the device relative to the most current information maintained by the updater, **see paragraphs [0017] & [0020-0021]**).

The combination of Samsolovic in view of Rao does not disclose judging by the management server whether said terminal device can be maintained automatically, if it is judged that the terminal device can be maintained automatically, said management server maintaining said terminal; otherwise, said management server reporting the information of the terminal to a maintenance unit (MU), however the limitation is known in the art of communications by evidence of Aiba et al. USP (7,600,226)

Referring to Fig. 1, Aiba discloses upon receiving version information data of a device 4000, PC 1001 judges whether the device can be maintained automatically, if it is judged that the device can be maintained automatically, maintaining the device with a software update by said PC server 1001, (**see Fig. 5 step S1007 & Col. 7 line 41 – Col. 8 lines 1-25**)

Aiba teaches conventionally, printer driver in information processing apparatus may be updated in such a manner that a user inquiries a support center for updated printer

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drivers, where it is required the user knows version information regarding the users current printer driver. In the conventional method, there was a problem in that finding the latest printer drive was time consuming and onerous for the user, (**see Col. 1 lines 19-49**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for judging whether a terminal device can be automatically maintained at a management server by its terminal information, otherwise reporting the terminal information to a maintenance unit by including the teachings of Samsolovic in view of Rao who discloses reporting, by a terminal accessing said communications network, the information of the terminal to a management unit; receiving at a management server, terminal information sent from a management unit, where either a central server or an updater, can automatically maintain the terminal device, within the teachings of Aiba who discloses judging by a server, whether version information data of a device received at the server can be maintained automatically, and maintaining by the server, the device if it is judged the device can be maintained automatically, in order for a client to avoid contacting a support center which is time consuming.

The combination of Samsolovic in view Rao, and further in view of Aiba do not disclose if it is judged that the terminal device can be maintained automatically, maintaining, by

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said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, however the limitation is disclosed in the applicants admitted prior art (AAPA).

Referring to Fig. 3, in step 13, judging by the DM server whether the terminal device can be maintained automatically is illustrated. *"The DM server searches the local maintenance database to see whether there is corresponding solution information according to the application information indicated in the error information; if there is a matched solution, the DM server determines the error may be solved automatically, and the flow proceeds to step 16", (see Para [0013]).* In step 16, *"the DM server implements the terminal software resolution following the standard OMA DM process", (see Para [0116])*

Referring to (Para [0002-0013]), the standard open mobile alliance (OMA) DM process is disclosed for automatically maintaining a terminal device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, if it is judged that the terminal device can be maintained automatically by including the teachings of Samsolovic in view of Rao, and

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further in view of Aiba, within the teachings of the applicants admitted prior art, in order for a client to avoid contacting a support center which is time consuming.

Regarding Claim 27, the combination of Samsolovic in view of Rao, further in view of Aiba, and further in view of AAPA discloses the method as in claim 26, wherein the information of said terminal is reported to said management unit via a software program interface; (**see Samsolovic, Para [0014] lines 5-16**).

said software program interface comprises a messaging interface, a file interface, an API, or a Web service interface, (**see Samsolovic, Para [0052]**).

Regarding Claim 28, the combination of Samsolovic in view of Rao, further in view of Aiba, and further in view of AAPA discloses the method as in claim 27, wherein said messaging interface comprises an XML interface or a network protocol interface. (**Referring to Fig. 4, Samsolovic illustrates an XML interface at step 2, see paragraphs [0015] & [0040]**).

Regarding Claim 29, the combination of Samsolovic in view of Rao further in view of Aiba, and further in view of AAPA discloses the method as in claim 27, wherein when said software program interface employs said API (**Samsolovic, Para [0052]**), said

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terminal information is combined into an XML format and is reported to said API as an argument, **(see Samsolovic, Fig. 4 step 2 & paragraph [0040])**.

Regarding Claim 32, Samsolovic discloses a method for maintaining a terminal device applied to a communication network, the method comprising:

sending, by the terminal device **(see Fig. 1, Client 12)** information of the terminal device to a management unit, **(See updatable component in Para [0008])**.

upon receiving the information of the terminal device, the management unit sending the information to a management server; **(Referring to Fig. 1, the updatable component (management unit) located in client device 12 transmits terminal information to a server, see Para [0008])**.

upon receiving the information of the terminal device, said management server sending a corresponding software update package for maintaining said terminal device to said management unit, **(see Para [0020-0021])**

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Samsolovic does not expressly disclose the terminal device reporting the terminal information to the Management Unit directly. However the limitation is known in the art of communications by evidence of Rao (US 2004/0123282)

(Rao discloses a terminal device reporting (**Fig. 1, Item 115**), the terminal information to a Management Unit directly (**Fig. 1, Item 117**), where the bootstrap 115 located in the mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9**).

(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, for a management server to maintain a terminal by sending a corresponding software update package by receiving terminal information from a management unit as taught by Samsolovic, by using a terminal device to report the terminal information to a management unit directly for receiving software updates as taught by Rao, to receive software updates in the instance of errors in the device for user convenience and quality of service.

Referring to Fig. 2, Samsolovic illustrates servers 20 and 22 working together through central server 14 (*i.e.*, **DM server**) are referred to as an updater. The server 14 provides

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an interface between the client 12 and the servers 20 and 22 in order to facilitate software and configuration updates (*i.e., maintain terminal device automatically*). Further Samolovic discloses any one of the servers 14, 20, and 22 can contain the update information (**see Para [0016] line 11-14**), implying if one server is not able to maintain the client device 12, then an alternate server (*i.e., updater 20,22,*) is able to contain update information for the client device 12, **see Para [0016]**.

(In regards to applicants disclosure in paragraph [0040], the maintenance unit is coupled to the DM server and is adapted to acquire, store, and maintain the information of the terminal device. Referring to Fig. 3, Samsalovic illustrates updater 32 (*i.e., maintenance unit*) coupled to server 34. Once the client contacts the parent server, then the client is able to obtain and download updates as determined by the information stored in the device relative to the most current information maintained by the updater, **see paragraphs [0017] & [0020-0021]**).

The combination of Samsolovic in view of Rao does not disclose judging by the management server whether said terminal device can be maintained automatically, if it is judged that the terminal device can be maintained automatically, said management server maintaining said terminal; otherwise, said management server reporting the information of the terminal to a maintenance unit (MU), however the limitation is known in the art of communications by evidence of Aiba et al. USP (7,600,226)

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Referring to Fig. 1, Aiba discloses upon receiving version information data of a device 4000, PC 1001 judges whether the device can be maintained automatically, if it is judged that the device can be maintained automatically, maintaining the device with a software update by said PC server 1001, **(see Fig. 5 step S1007 & Col. 7 line 41 – Col. 8 lines 1-25)**

Aiba teaches conventionally, printer driver in information processing apparatus may be updated in such a manner that a user inquiries a support center for updated printer drivers, where it is required the user knows version information regarding the users current printer driver. In the conventional method, there was a problem in that finding the latest printer drive was time consuming and onerous for the user, **(see Col. 1 lines 19-49).**

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for judging whether a terminal device can be automatically maintained at a management server by its terminal information, otherwise reporting the terminal information to a maintenance unit by including the teachings of Samsolovic in view of Rao who discloses sending by the terminal device, information of the terminal device to a management unit, upon receiving the information of the terminal device, the management unit sending the information to a management server, upon receiving the information of the terminal device, said management server sending a corresponding

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software update package for maintaining said terminal device to said management unit, within the teachings of Aiba who discloses judging by a server, whether version information data of a device received at the server can be maintained automatically, and maintaining by the server, the device if it is judged the device can be maintained automatically, in order for a client to avoid contacting a support center which is time consuming.

The combination of Samsolovic in view Rao, and further in view of Aiba do not disclose if it is judged that the terminal device can be maintained automatically, maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, however the limitation is disclosed in the applicants admitted prior art (AAPA).

Referring to Fig. 3, in step 13, judging by the DM server whether the terminal device can be maintained automatically is illustrated. *"The DM server searches the local maintenance database to see whether there is corresponding solution information according to the application information indicated in the error information; if there is a matched solution, the DM server determines the error may be solved automatically, and the flow proceeds to step 16", (see Para [0013]).* In step 16, *"the DM server implements the terminal software resolution following the standard OMA DM process", (see Para [0116])*

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Referring to (**Para [0002-0013]**), the standard open mobile alliance (OMA) DM process is disclosed for automatically maintaining a terminal device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for maintaining, by said DM Server, the terminal device following an Open Mobile Alliance (OMA) DM process, if it is judged that the terminal device can be maintained automatically by including the teachings of Samsolovic in view of Rao, and further in view of Aiba, within the teachings of the applicants admitted prior art, in order for a client to avoid contacting a support center which is time consuming.

8. Claims 21-22 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et al. US (2005/0102662) in view of Rao (US 2004/0123282), further in view of Aiba et al. USP (7,600,226), and further in view of Applicants admitted prior art (AAPA) as applied to claim 17 and 26 above, and further in view of Chatrath US (2005/0060361).

Regarding Claim 21, the combination of Samsolovic, in view of Rao, further in view of Aiba, and further in view of AAPA, disclose discloses the system as in claim 17, wherein said management unit sends the information of said first terminal to said management server (**Samsolovic, see paragraph [0008]**).

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(Samsolovic teaches that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (e.g., return to service center), **See paragraphs [0002-0005]**).

The combination of Samsolovic in view of Rao, in view of Aiba, and further in view of AAPA do not disclose the management unit sending said terminal information to said management server via an extended open mobile alliance protocol. However the limitation is known in the art of communications, however the limitation is known in the art of communications by evidence of Chatrath US (2005/0060361).

(Chatrath teaches a terminal is able to communicate terminal information with a server, via an extended open mobile alliance protocol, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement where a management unit to send said terminal information to a management server as taught by the combination Samsolovic in view of Rao, further in view of Aiba, and further in view of applicants admitted prior art by using an extended

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Open Mobile Alliance DM protocol between a terminal and server as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 22, the combination of Samsolovic in view of Rao, further in view of Aiba, further in view of AAPA, and further in view of Chatrath discloses the system as in claim 21, wherein said management unit sends the information of said first terminal to said management server:

with a command of said extend OMA DM protocol which supports active event triggered by clients; or

by extending a standard command of said OMA DM protocol into a terminal information reporting command; or

by adding a special terminal information reporting command into said OMA DM protocol;

or

with a command of said OMA DM protocol directly, **(Referring to Fig. 2, Chatrath illustrates a management session message (command) transmitted to a management server at step 209 using the OMA DM protocol, see paragraph [0027] lines 18-22).**

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Regarding Claim 30, the combination of Samsolovic, in view of Rao, further in view of Aiba, and further in view of AAPA, disclose discloses the system as in claim 26, wherein said management unit sends the information of said terminal to said management server, (**Samsolovic, see paragraph [0008]**).

(Samsolovic teaches that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (e.g., return to service center), **See paragraphs [0002-0005]**).

The combination of Samsolovic in view of Rao, in view of Aiba, and further in view of AAPA do not disclose the management unit sending said terminal information to said management server via an extended open mobile alliance protocol. However the limitation is known in the art of communications, however the limitation is known in the art of communications by evidence of Chatrath US (2005/0060361).

(Chatrath teaches a terminal is able to communicate terminal information with a server, via an extended open mobile alliance protocol, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement where a management unit to send said terminal information to a management server as taught by the combination Samsolovic in view of Rao, further in view of Aiba, and further in view of applicants admitted prior art by using an extended Open Mobile Alliance DM protocol between a terminal and server as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 31, the combination of Samsolovic in view of Rao, further in view of Aiba, further in view of AAPA, and further in view of Chatrath disclose the method as in claim 30, wherein said management unit sends the information of said terminal to said management server:

with a command of said extend OMA DM protocol which supports active event triggered by clients; or

by extending a standard command of said OMA DM protocol into a terminal information reporting command; or

by adding a special terminal information reporting command into said OMA DM protocol; or

with a command of said OMA DM protocol directly. **(Referring to Fig. 2, Chatrath illustrates a management session message (command) transmitted to a**

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management server at step 209 using the OMA DM protocol, see paragraph [0027] lines 18-22)

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADNAN BAIG whose telephone number is (571) 270-7511. The examiner can normally be reached on Mon-Fri 7:30m-5:00pm eastern Every other Fri off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ADNAN BAIG/
Examiner, Art Unit 2461

/Huy D Vu/

Supervisory Patent Examiner, Art Unit 2461